Remarks

Double Patenting

The Examiner rejected Claims 1-12 under the doctrine of obviousness-type double patenting as being unpatentable over US 6,369,174. The Applicant herein submits a Terminal Disclaimer and Power of Attorney giving the present agent authority to act for the Applicant as such.

Section 103 Rejections

The Examiner rejected Claims 1-12 under 35 U.S.C. § 103(a) as being unpatentable over *Goode et al.* (WO 98/20045); and *Agapiou et al* (US 6,140,432). The Applicant traverses these rejections, and requests that they be withdrawn.

Goode Rejection

Applicant's claimed invention is to a catalyst composition that includes "a thermally triggered compound that at a specific temperature chemically transforms into one or more catalyst inhibitors". As the specification and examples in Applicant's invention demonstrate, the "thermally triggered compound" may in fact be part of the catalyst composition, as it alone does not inhibit the polymerization reaction. The species that inhibits the polymerization reaction, as Applicant claims, is formed only "at a specific temperature". That temperature may or may not be reached during the polymerization.

Goode does not anticipate Applicant's invention. Simply stated, Applicant claims a compound that, upon its addition, does not inhibit polymerization until a certain condition is met; whereas *Goode* teaches a compound that, upon its addition, does inhibits polymerization without other preconditions.

Goode discloses adding an polymerization inhibitor to the reactor. The compound described in *Goode* that is added to the reactor is in fact the compound that immediately acts as an inhibitor (or "antifouling agent") of the reaction upon its addition alone. While the specification states that the antifoulant agent "can be added as a gas, liquid or solid", it is implicit

in the teaching of *Goode* that the agent is one that acts upon addition to the reactor without any other precondition. This is described in the Figure, which is derived from the examples starting on page 24.

Goode does not disclose or suggest the Applicant's "thermally triggered compound". The Examiner states that "it necessarily flows from the polymerization process for preparing polyolefins . . . that by adding a solid anti-fouling agents under the polymerization temperatures range from about 0°C to about 200°C the solid anti-foulant agent will change phases reducing the effectiveness of the polymerization catalyst." (page 4 of paper 7). The applicant disagrees that this makes the "thermally triggered compound" obvious. While it might be the case that the antifoulant of *Goode* does change phase at a certain temperature, there is no teaching of a compound that is not an inhibitor when added initially, yet, upon a certain temperature, transforms into, or releases, a polymerization inhibitor. The teaching of *Goode* is that reactor fouling is "immediately stabilized" upon addition of the antifoulant. (page 26, first full paragraph). There is no teaching in *Goode* that there must be a certain temperature in order for the antifoulant to be activated, as Applicant claims, only that the antifoulant compound should be added to the polymerization reactor while polymerization is taking place.

Further, on page 26, second full paragraph, the nature of the antifoulant of *Goode* is further elucidated, as it is described that "the reactor was purged with nitrogen to remove the [antifoulant]". Then, in the next paragraph, it is stated that "conditions for polymerization were reestablished." Again, no preconditions are stated for the action of the antifoulant, only its presence or absence. The "antifoulant" of *Goode* is itself the species that performs the inhibition.

The Examiner admits that "Although *Goode* does not explicitly state any of the selected antifouling agents change phase at a temperature above the operating temperature . . .". (page 3 of paper 7). It must be recognized, as described above and in the Applicant's specification, the "thermally triggered compound" is not equivalent to, or suggested by, the antifoulant of *Goode*. The two elements operate by completely different modes, and one cannot be substituted for another. Given the lack of disclosure in *Goode* of the "thermally triggered compound" as

claimed by the Applicant, it is submitted that *Goode* does not anticipate Applicant's invention as claimed.

Agapiou Rejection

Agapiou discloses surface modifiers for support materials, especially those with surface hydroxyls. The method of combining the surface modifiers to the supports is found at col. 8, lines 56-67 and col. 9, lines 1-67. The teaching, as suggest also in the Background in col. 1, lines 20-40, is that surface modifiers are useful to remove undesirable species on the surface of the supports used in olefin polymerization. The removal of these species is intended to increase the catalyst activity, not reduce it.

One skilled in the art would not take the teaching of *Agapiou* and apply it to the problem being solved by the applicant, which is to add an agent that, upon certain conditions, will form an inhibitor to inhibit the polymerization. In fact, modifying *Agapiou* as such would be contrary to how that invention operates. "The proposed modification cannot change the principle of operation of a reference." **MPEP** § 2143.01, 2100-132 (Rev. 2, May 2004). Thus, it is submitted that *Agapiou* does not anticipate Applicant's invention as claimed.

It is submitted that the case is in condition for allowance. The Applicant invites the Examiner to telephone the undersigned attorney if there are any other issues outstanding which have not been presented to the Examiner's satisfaction.

Respectfully submitted,

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